Bulletin of the Russian Academy of Sciences: Physics 2010 vol.74 N7, pages 963-965

The bound states problem in quantum electrodynamics and vacuum polarization effects in muonic atoms

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Abstract

Quantum electrodynamic bound states in strong electromagnetic fields are considered. It is shown that the dynamics of the system can not be described completely in the adiabatic S-matrix approach. Vacuum polarization effects in muonic atoms are studied using the paradigm of generalized quantum dynamics. This approach leads to additional correction terms. © 2010 Allerton Press, Inc.

http://dx.doi.org/10.3103/S1062873810070166